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Production of multilayer optical films - comprises extruding two resins into resin stream having multiple layers and casting thinnest layers against casting surface

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Patent Family (10 patents, 79 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
WO 1999006203	A1	19990211	WO 1998US13094	A	19980624	199913 B
AU 199879865	A	19990222	AU 199879865	A	19980624	199927 E
EP 999928	A1	20000517	EP 1998930481	A	19980624	200028 E
			WO 1998US13094	A	19980624	
CN 1265622	A	20000906	CN 1998807825	A	19980624	200065 E
JP 2001512061	W	20010821	WO 1998US13094	A	19980624	200155 E
			JP 2000504995	A	19980624	
KR 2001022400	A	20010315	KR 2000700980	A	20000128	200159 E
EP 999928	B1	20020911	EP 1998930481	A	19980624	200264 E
			WO 1998US13094	A	19980624	
DE 69807896	E	20021017	DE 69807896	A	19980624	200276 E
			EP 1998930481	A	19980624	
			WO 1998US13094	A	19980624	
CN 1135159	C	20040121	CN 1998807825	A	19980624	200579 E
KR 571738	B1	20060418	WO 1998US13094	A	19980624	200724 E
			KR 2000700980	A	20000128	

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Alerting Abstract WO A1

Production of a multilayer optical film, comprises: extruding two resins into a resin stream with multiple layers and two major surfaces; and casting the resin stream against a casting surface such that the first surface is in contact with the casting surface. At least some of the layers comprise a first resin and at least some comprise a second resin. The number of layers having thickness $< k$ μm and disposed within 400 μm of the first surface (m) is at least equal to the number of layers having thickness $< k$ μm and disposed within 400 μm of the second surface (n), and $k \leq 10$. At least some of the layers are of a first layer type having thickness $< k$ μm and at least some of these layers are disposed within 400 μm of the first surface and at least some within 400 μm of the second surface, and $k \leq 10$. Alternatively a first set having member(s) comprising the layers having thickness $< k$ μm and disposed within 400 μm of the first surface has at least as many members as a second set comprising the layers having thickness $< k$ μm and disposed within 400 μm of the second surface, $k \leq 10$, and the median layer thickness of the first set is not greater than that of the second set.

ADVANTAGE - The degradation of layer integrity and optical properties of the thin layers is avoided or minimised by casting the first surface against a casting wheel or other surface.